

## July 19, 2023 Meeting Minutes

1:30 pm – 3:30 pm

**Meeting Location:** Oklahoma Department of Wildlife Conservation

### Welcome and Opening Comments

Joni & Souzan thanked everyone for attending and their commitment, and providing their updates for their initiatives.

### Standing Committee on Pre-Construction (Daniel Nguyen)

#### STIC Incentive Project:

Development of standard drawings for low-cost bridge options for use by Local Public Agencies (LPAs) on low-volume locally owned roads

(ODOT Champion: Justin Hernandez – FHWA Champion: Ralph Nguyen)

Matt: Discussions had with Chief Engineer, supportive of internal curing. Inter-saturated light weight, lack of suitable light aggregate. Do sister bridges for comparison. Brian is in support of the project, not in western Okla. 10 years Missouri Dolese has been bringing limited quantities in town 10-15% fine mix. We need access to materials to play around with it. Received proposed details in April 2023. Sent out for internal review (Bridge Division and Local Gov. Division). Received comments back from Bridge Division review. Local Government (LG) stakeholder comments require further communication with a fabricator.

### Standing Committee on Construction, Materials, and Maintenance (Matt Romero)

#### EDC-7 Innovation:

Enhancing Performance with Internally Cured Concrete - EPIC2

(ODOT Champion: Matt Romero – FHWA Champion: Ralph Nguyen)

Walt: We have selected a bridge replacement project in Texas County and plan to do the internal curing on the south span of this bridge deck. We anticipate funding in October. It is our plan to use the STIC funds with 20% matching ODOT funds for the research and material cost for the lightweight aggregate needed for internal curing.

#### STIC Incentive/AID Projects:

Fiber-Reinforced Asphalt Concrete Using Aramid Fibers

(ODOT Champion: Matt Romero – FHWA Champion: Waseem Fazal)

Matt: Materials Division will obtain samples to perform cracking (Ideal-CT), rutting (HWTT), and AMPT testing to determine the suitability of Aramid Fiber reinforcement technology for State projects. The project will be closely monitored during and after construction to determine long-term performance. No additional updates.

Phoenix Test Method

(ODOT Champion: Matt Romero - FHWA Champion Waseem Fazal)

Matt: The Materials Division will continue to use the Phoenix on future mixes, all test data will be recorded and provided to Dr. Tyler Ley (OSU). ODOT is in the process of determining which projects would be best suited for the implementation of the Phoenix meter. Residencies will continue to attend training sessions until a location has been selected. The Materials Division has done extensive testing with the Phoenix and will assist the metro areas on future projects. No additional developments at this time.

#### Bridge Deck Cure and Seal to improve the current curing method

(ODOT Champions: Walt Peters/Bruce Arnold – FHWA Champion: Ralph Nguyen)

Walt: Dr. Ley had the following comments: The testing on the cores is nearing completion. A summary of the testing has been sent to Walt Peters for review. The results show that the surface of the cores do have a high resistance to outside chemicals. However, this resistance is seen on the cores that were treated with silencure and those that were not. This makes it challenging to draw a conclusion from the work. In addition, testing was done to measure the thickness of the waterproof layer at the surface. The same techniques were used that are typically used by the research team to investigate silane penetration into hardened concrete. There was no observed penetration into the concrete. This means that if the silane from the curing compound penetrated the concrete, then the penetration was very low and not observable. This means the water proofing layer will be thin and may not be long lasting.” There is ion penetration into the cores taken from the sides and this penetration is consistent. This is expected. There is no ion penetration on the surface where silencure is applied and there is no penetration where there is no silencure. This is not expected. This shows that something is stopping ions from penetrating into the surface of the concrete on the samples coated with silencure and without coating. This might be caused by silencure being applied at all locations or it could be something else. Unfortunately, we are concerned that the results may have been contaminated by the application of anti-graffiti material.

#### Demonstrate Two-Coat Deck Seal System

(ODOT Champion: Walt Peters/Bruce Arnold – FHWA Champion: Ralph Nguyen)

Walt: Comments by Dr. Ley - This is still preliminary: “I think we have more depth of penetration data coming. I think it shows the two-coat soaks deeper. We have data to show the silane + epoxy works great but that is on another project. We are working on making slides for all of these”. We hope to have additional updates on the final outcome of this research in the next few weeks.

#### **Standing Committee on Safety, Mobility, and Technology (Alan Stevenson)**

##### **EDC-7 Innovation:**

#### Next-Generation Traffic Incident Management: Integrating Technology, Data, and Training

(ODOT Champion: Alan Stevenson – FHWA Champion: Huy Nguyen)

Alan: We’re still in the planning phase. Meeting with Taylor Henderson & Brian Taylor to discuss training. We also plan to meet with DPS officials to discuss integration. We will have more to update in our next meeting.

Souzan: In coordination from headquarters, they're trying to get the services of a consultant on various consultants to help with technical assistance.

#### Nighttime Visibility for Safety

(ODOT Champion: Marty Farris – FHWA Champion: Huy Nguyen)

Speaker: ODOT is using AASHTO Lighting Guideline as their warrant for lighting. ODOT will expand its STEP implementation plan. It will be part of ODOT Active Transportation Plan. Project in development for adding additional lighting around areas that meet the AASHTO Lighting guide warrants. Looking into different programs.

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**STIC Incentive Projects:**CAV Task Force Support

(ODOT Champion: Tara Brown – FWHA Champion: Huy Nguyen)

Tara: Comprehensive AV Consumer Benchmarking Study - Tom Robins met with lead researchers from MIT, JD Power & PAVE regarding Consumer Confidence and Understanding of Fully Automated, Self-Driving Vehicle's comprehensive benchmarking study. Secured Lisa Boor Senior Manager, Auto Benchmarking and Mobility Development JD Power & Kathleen Rizk Senior Director, User Experience Benchmarking and Technology at J.D. Power to present in December to the full Oklahoma Advanced Mobility Council.

5-State Proposal for the ATMA Smart Grant - Tom Robins met with Alan Stevens from ODOT regarding working with Colorado's Autonomous Vehicle pool fund study to submit a 5-state proposal for the ATMA Smart grant proposal. Each state will receive some grant money to assist in developing autonomous vehicle deployments. Alan agreed to advise the committee when opportunities for review and feedback are available.

Wireless Sensor for Detection of Black Ice Radar-Based Warning System and Stakeholder-Focused Outreach for Enhancing Safe Driving on Icy Roads

(ODOT Champions: Alan Stevenson/Taylor Henderson - FHWA Champion: Huy Nguyen)

Alan: The OU team was focused on the characterization of electrical properties of asphalt and concrete materials that are commonly used in roadway pavements and bridge decks. Among other parameters, these characterizations ensure that the integrity of the RF signal between the sensor and the RF reader is maintained. Next steps, the project is organized to continue working in next task by continuing working with the current information acquired to improve the detecting algorithm and start working on Phase 4 for having a radar-base prototype system and testing. This study is complete. A report has been prepared, and data is under review to determine the next steps.

Expand Utility Surveying Capabilities

(ODOT Champion: Robert Blackwell FHWA Champion: Scott Armstrong)

Siv: ODOT is in the process of developing a GIS database for storing information on as relocated, abandoned in place, or new utilities in ODOT right-of-way in addition to sharing the information with contractors during construction. Several meetings have been held between Survey, GIS and Utilities areas. Survey and GIS are working on setting up a GIS database for existing utilities collected as part of design survey. Utilities Branch will start providing proposed utility relocation files to Office Engineer to share with contractors. Additional coordination with utility companies will be needed to discuss non-disclosure clause on storing and sharing information on existing utilities in ODOT.

**Standing Committee on Special Initiatives (Teresa Stephens)****EDC-7 Innovation:**Strategic Workforce Development

(ODOT Champion: Jennifer Hankins – FHWA Champion: Souzan Bahavar)

Speaker: The Oklahoma Transportation Construction Pre-Apprenticeship Program will create a sustainable pool of skilled applicants for the highway and construction industry. Potentially reducing cost and time to contractor bids. We're working on getting partners for trainings.

**STIC Incentive Projects:**Pre-Apprenticeship Stakeholder-Focused Training Program

(ODOT Champion: April Meadows – FHWA Champion: Souzan Bahavar)

April: The next step is to utilize the needs assessment data as well as the lessons learned provided at a SWD Workshop in Dallas, Texas (hosted by FHWA) where several State DOTs and industry partners shared their SWD programs and experience to develop a Pre-Apprenticeship Stakeholder-Focused Training Program and advance the implementation of the SWD initiative.

Accelerating Innovation Deployment in Oklahoma – Phase II Innovation Webinar Series – Seeking Up-and-Coming Innovation Topics

(ODOT Champion: Teresa Stephens – FHWA Champion Souzan Bahavar)

Teresa: Final report submitted, the project resulted in a large amount of positive feedback. Positive in that the attendees want the agency to continue production. The consultant compiled the following statistics after the last webinar.

- 201 attendees joined two or more webinars,
- 127 attendees joined three or more webinars,
- 53 attendees joined four or more webinars,
- 19 attendees joined five or more webinars and
- Four attendees joined six webinars.
- Zero attendees joined all seven webinars.

Here are portions of the survey analysis provided by the consultant after the webinar and attendees had an opportunity to submit feedback through a short survey. Challenges throughout the project were mainly coordinating calendars for invited speakers to participate in the “dress rehearsals” and finding a time to host the webinar without conflicting with other known large meetings/conferences being held throughout the year.

The committee volunteered a lot of time at the preliminary planning portion of this project; this planning was done BEFORE the consultants were selected to make their work somewhat easier. We decided that if we put together a program and elected speakers, then we would have accomplished enough to get the program started and line up the dates in advance. We did learn that it is important to hold the webinars around 3 months apart, as the attendees suggested. I do believe that if an in-person networking event had been held the attendance would not have been as consistent and the out-of-town participants who attended the webinar series would not have attended a networking event.

**Closing Comments**

We’re going to work on setting up occurrences for our quarterly meetings. We will also send out a poll to gauge everyone’s preference in alternating between in-person and virtual meetings to accommodate everyone’s busy schedule.

Next Meeting:

Nov/Dec 2023, OK STIC Quarterly Meeting